

April 30, 1970

The Tobacco Institute has twice requested the American Cancer Society to make available for impartial scientific examination the data which it claims is the basis for its widely publicized allegations concerning the results and implications of an experiment entitled, "The Effects of Cigarette Smoking Upon Dogs." This experiment was conducted by Dr. Oscar Auerbach, a research grantee of the Cancer Society and by Dr. E. Cuyler Hammond, a Vice President of the Cancer Society. The Cancer Society has twice refused these requests.

On February 5, at a press conference at the Waldorf-Astoria Hotel in New York, the Cancer Society announced that these researchers had induced lung cancer in beagles which had "smoked" cigarettes through an opening in their throats. The Cancer Society claimed in a press release -- and newspapers throughout the world reported -- (a) that "for the first time, scientists have produced lung cancer in a significantly large experimental animal as a result of heavy cigarette smoking"; (b) that "their findings should have a significant impact on the smoking of cigarettes in this country, and will probably lead to a reassessment of advertising claims and policies of the cigarette industry"; and (c) that "the findings effectively refute contentions by cigarette manufacturing interests that there was no cigarette-cancer link, and any claims to the contrary were only 'statistical'."

No scientific paper has yet been published describing the experiment and its results. Nevertheless, the American Cancer Society has attempted to make capital of the work by publicizing it as a landmark achievement in research.

The Cancer Society has attacked in specific terms the cigarette industry's contention regarding the present status of scientific research as well as the industry's products and advertising claims and policies. The answer to this attack is a simple and logical one: Let the experiment and its results be evaluated by a group of scientists expert in

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experimental design and cancer research, and let this group decide the validity of the Cancer Society's claims. The Cancer Society's present refusal to permit this evaluation leads the industry to suspect that the significance of the experiment lies more in the area of publicity than science.

Over the years there have been many many experiments in which scientists have tried to induce lung cancer in animals with cigarette smoke. These experiments have resulted in a persistent failure to demonstrate that cigarette smoke produces lung cancer, resembling lung cancer in humans, in any of the species and strains of animals so far used.

In addition, the history of tobacco and health research contains several examples of experiments which were initially hailed as scientific breakthroughs, but on later evaluation proved to be of little significance. For example, in 1962 scientists were reported to have induced lung cancer in one of a group of dogs with cigarette "tar." That report was later discredited when examination of the data showed that the "cancer" was found just a few days after the experiment started.

In 1968, the Cancer Society described as an experimental "first" the then recently published work of two British scientists. The reported induction of lung cancer in mice by use of cigarette smoke was hailed as undermining the long-standing defenses of the tobacco industry. The actual results, as reported by the investigators in the scientific literature, did not support this interpretation. In their published article, the authors made no claim that any of the mice developed the type of lung cancer which predominates in humans.

Unfortunately, the results of experimental work as released to the mass media are often oversimplified and lead to conclusions which are not substantiated by the reports of the same work in scientific journals.

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This is particularly true when, as in the present case, preliminary experimental results are released to the lay press before review by competent editorial boards <sup>or</sup> ~~of~~ other scientific authorities.

In the field of scientific investigation, the publicizing of preliminary experimental results in the lay press before publication in an authoritative medical journal is considered an improper -- if not a censurable -- practice. A discussion of the impropriety of this type of conduct appeared in the New England Journal of Medicine last year. ~~You have in your press kits copies of two letters which appeared in this prestigious journal.~~ *In one letter to the Journal* Under the heading of "Reports that Jump the Gun", a doctor says, "Isn't it about time that medical scientists realized the impropriety of giving preliminary experimental results to lay journals, newspapers and even radio and television reporters?" He suggests as one means of curbing this practice that "...editors of medical and scientific journals, who at present require that original articles should not have been submitted or published elsewhere, should refuse any material that has already been given to or reported in lay journals or through <sup>information</sup> public media."

<sup>a</sup> In the second letter, a science reporter comments: "The serious science-news reporter uses an investigator's failure to appear either in a professional journal or on the program of an established research society as at least a guideline that the investigator's peers regard his work as of doubtful value and hence to be treated with caution."

In the case of the Auerbach-Hammond experiment, which was announced to the press before publication, the industry believes that the Cancer Society has an obligation to make the work available promptly for evaluation, and ~~to correct any misimpressions about the results of their scientific significance that may be shown by the expert evaluation.~~

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There are many questions which can be raised about the experimental design, the procedure followed and the pathologic findings which need to be answered. Some of these are mentioned in the attached letter to The New York Times from a Professor of Biology at Amherst College and in the attached excerpt from the Congressional Record which includes a letter from a prominent pathologist.

Specifically, the industry believes that among the major questions to be answered by an impartial review are the following:

1. Did the "smoking" dogs ~~actually develop~~ <sup>as the CS claimed</sup> squamous cell carcinomas, histologically indistinguishable from that same form of lung cancer in humans, as the Cancer Society alleged?

This is the major claim which the Cancer Society makes for the significance of the experiment. The Tobacco Institute insists that the scientific validity of this claim can only be settled by the judgment of qualified pathologists after examination of the original tissue specimens and slides.

2. Is there adequate evidence to establish that the other types of lung tumors observed in the dogs resulted from their exposure to cigarette smoke? Experts in animal pathology might have an opinion on such questions as: Why 25% of the dogs that did not "smoke" were found to have lung tumors? Whether the type of lung tumor most frequently found in both the "smoking" and control animals has any relevance in terms of the most common form of lung cancer in humans? These judgments depend on examination of the tissue specimens and slides as well as other information that can only be gathered from first-hand examination of the data.

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3. Were the results affected by the technique used to get the smoke to the dogs' lungs? Authorities may question whether the insertion of smoke directly into the windpipe is comparable to human smoking. What dose of smoke reached the animal's lungs? In what ratio was the smoke diluted with air?

4. Was the experiment designed and were the results interpreted in a proper way from the standpoint of experimental methodology? Experts would evaluate such matters as: Whether the number of control dogs (8) was sufficient in view of the fact that there were 89 dogs in the experimental group? Whether the so-called "controls" were proper controls in terms of this experiment? Whether the differences in lung tumor incidence between the control group and the various experimental groups are statistically significant? Whether the dogs assigned to the various groups were randomly selected?

5. Experts in experimental work would give their judgment on whether beagle dogs are appropriate animal models for research relating to such human diseases as lung cancer and emphysema.

The foregoing are mentioned as only some of the matters which should be studied and they should not foreclose consideration of other pertinent questions.

The Cancer Society, in denying the Institute's request for impartial scientific examination of the data, stated that the formal papers, when published, will answer any scientific or other questions the industry may have. This is not wholly true. Even if it were, this is no reason for refusing access to the actual data and materials. The formal article probably

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will not be published for some time. In fact, however, a published article, no matter how detailed in description and illustration, will not satisfy the crucial questions about this work; it cannot substitute for personal evaluation of the tissues, slides, experimental technique and methodology, etc. Research scientists are well aware of this.

Many industries are presently under attack because their products or manufacturing processes are said to produce cancer hazards. Only recently scientists have begun to emphasize that the causes of lung cancer and other major respiratory diseases are probably related to man's total environment. Nevertheless, the American Cancer Society continues to emphasize cigarette smoking while virtually ignoring every other suspected environmental cancer hazard. The Tobacco Institute believes it has the right to seek an examination by impartial scientists of this particular research under the control of the Cancer Society. If the Cancer Society chooses to shield its research results from adequate scientific examination, it cannot claim to be a disseminator of complete and authentic information about cancer.

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